

REMARKS

Initially, it is noted that the Examiner has once again objected to the drawings under 37 CFR § 1.83(a) as failing to show every feature of the invention specified in the claims and has objected to the specification for the same reason. Applicant is perplexed as to the basis for the Examiner's objection. Numerous attempts by Applicant's attorney to contact the Examiner to discuss the basis for the objection were unsuccessful. It appears that the Examiner believes that certain phrases used in the claims, namely, "interior," "control module," "power unit," "interface," "intermediate unit," "power supply unit," and "control structure" are not shown in the drawings. However, based upon a review of the claims and the specification, it appears that Examiner is merely objecting to the fact that certain claim elements are not identified exactly as provided for in the specification. For example, the specification utilizes the phrase "interface module," while claims 9-16 refer to the component as an "interface unit." As hereinafter described, however, there is no requirement that the language used in a claim must mirror the language used in the specification.

Referring MPEP, § 2173.01, [a] fundamental principal contained in 35 U.S.C. 112, second paragraph, is that applicants are their own lexicographers. Applicants can define in the claims what they regard as their invention essentially in whatever terms they choose so long as any *special* meaning assigned to a term is clearly set forth in the specification. "[A] claim may not be rejected solely because of the type of the language used to define the subject matter for which patent protection is sought". *Id.* "An examiner must focus their examination of claims for compliance with the requirement for definiteness under 35 U.S.C. 112, second paragraph, as whether the claim meets the threshold requirements of clarity and precision, not with whether more suitable language or molds of expression are available." MPEP § 2173.02.

Given that applicant has used no special language in the claims and that the language in the claims is substantially similar to the language in the specification such that a person of ordinary skill in the art could interpret the meets and bounds of the claim, applicant must question why the Examiner has objected to the drawings under 37 CFR § 1.83(a) and to the specification as failing to provide proper antecedent basis. Clarification of the Examiner's objections or withdrawal of the same is respectfully requested.

The Examiner has also rejected claim 8 under USC § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended the dependency of claim 8 in order to overcome the lack of antecedent basis. It is now believed that claim 8 is in proper form for allowance and withdrawal of the Examiner's rejection of claim 8 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

The Examiner has rejected claims 1-8 under 35 U.S.C. § 103(a) as being unpatentable over Hein et al., United States Patent No. 6,452,349 in view of Schienbein et al., U.S. Application No. US 2003/0036806. In addition, claims 9-23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Schienbein et al., U.S. Application No. US 2003/0036806 in view of Gupta et al., U.S. Patent No. 6,605,928. As hereinafter described, applicant has amended the pending claims to more clearly define the invention for which protection is sought. Applicant believes that the claims now pending clearly define over the cited references and reconsideration of the Examiner's rejection under 35 U.S.C. § 103(a) is respectfully requested in view of the following comments.

Claim 1 defines a modular control system for an AC motor. The control system includes a drive module having an interior housing an AC drive. The AC drive interconnects the AC motor to a utility power source. A control module has an interior that houses a control structure for controlling operation of the AC drive. A redundant power supply is operatively connected to the control structure for supplying electrical power to the control structure. An intermediate module houses a plurality of conductors that interconnect the control module and the drive module. The plurality of conductors electrically couple the control structure in the AC drive and to allow the control structure to transmit operating instructions to the AC drive therethrough. As hereinafter described, neither of the cited references show or suggest a modular control system that includes a plurality of distinct modules having interiors for housing various components of a motor control or an intermediate module that interconnects the control module and the drive module so as to electrically couple the control structure and the AC drive and to allow the control structure to communicate with the AC drive.

The Hahn et al. '349 patent discloses an electronically commutated motor having a permanent magnet rotor and stator. The Examiner suggests that circuit discloses a drive module housing an AC drive, a control module housing a control structure and an intermediate module interconnecting the control module and the drive module. However, the Hahn et al. '349 patent merely discloses a circuit whereby the Examiner appears to be arbitrarily identifying modules. Nothing in the '349 patent shows or suggests a drive module having an interior for housing an AC drive, a control module having an interior for housing a control structure or an intermediate module housing a plurality of conductors, as required by independent claim 1. In fact, the Examiner concedes that the '349 patent does not explicitly recite that the control system is modular. The '806 application cannot cure the deficiencies of the of the '349 patent.

The '806 application is directed to a power conservation energy management system that includes a controller, one or more standard modules and a custom backplane. Initially, it is noted that nowhere in the '806 application are the modules described as having an interior, as required

by claim 1, or as housing components, as required by claim 1. Further, the backplane of the system of the '806 application does not allow for communication therealong between the control structure and the AC drive. More specifically, the backplane in the '806 application accommodates one or more modules and uses the modules to control power quality and/or the flow of power to one or more input/output selections. As best seen in Fig. 5, the back plane includes both analog and digital circuitry. The digital backplane communicates digital signals with the digital components of the inverter, converter and grid modules. The analog backplane communicates analog signals with the analog components of the inverter, and grid modules. The grid module monitors the voltages supplied by the inverter to the backplane and decides when the system should be connected to the power grid. Hence, no operating instructions pass between from the control structure and the AC drive through the grid connect module. Further, there is no teaching or suggestion in the '806 application to provide the intermediate module that includes a plurality of conductors to electrically interconnect a control structure and an AC drive so as to allow the control structures to transmit operating structures to the AC drive therethrough.

The modular control system of the claim 1 defines three distinct modules having interiors for housing various components of a motor control. The cited references do not show or suggest such a structure. In fact, both of the cited references are void of any teaching of a modular control system wherein the various components of the control system are housed within distinct housings. As such, it is believed that claim 1 clearly defines over the cited references and passage to allowance is respectfully requested.

Claims 2-8 depend either directly or indirectly from independent claim 1 and further define a modular control system not shown or suggested in the art. It is believed that claims 2-8 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Referring to claim 9, a drive system for an AC motor is defined. The drive system includes a power unit having an interior housing for an AC drive. The AC drive is connectable to the AC motor and to a power source. An interface unit also has an interior housing a programmable control circuit that controls operation of the AC drive. A redundant power supply is operatively connected to the control circuit for supplying electrical power to the control circuit. An intermediate unit is disposed between and interconnects the power unit and the interface unit. The intermediate unit houses a plurality of conductors that electrically couple the control structure and the AC drive. As hereinafter described, neither of the cited references show or suggest a modular control system defines three distinct units having interiors for housing various components of a motor control or an intermediate/interface unit that interconnects the interface unit and the power unit so as to electrically couple the control circuit and the AC drive.

As described with respect to independent claim 1, the '806 application fails to teach and/or suggests a modular control system wherein the units have interiors that house components. In addition, there is no teaching or suggestion in the '806 application to provide an intermediate unit that includes a plurality of conductors to electrically interconnect a control circuit and an AC drive. The '928 patent cannot cure these deficiencies.

The Gupta et al. '928 patent merely discloses an electrical system for a turbine/alternator comprising a gas driven turbine and permanent magnet alternator rotating on a common axis. Hence, there is no teaching or suggestion in either of the cited references to provide a modular control system in accordance with the present invention. Clearly, the '928 does not teach 1) a modular control system wherein the units having interiors that houses components; or 2) wherein an intermediate unit that includes a plurality of conductors to electrically interconnect a control circuit and an AC drive. Consequently, it is believed that independent claim 9 defines over the cited references and is in proper form for allowance.

Claims 10-16 depend either directly or indirectly from independent claim 9 and further define a drive system not shown or suggested in the art. It is believed that claims 10-16 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Claim 17 defines a drive system for an AC motor. The drive system includes a power module having an interior housing AC drive. The AC drive is connectable to an AC motor and to a power source. An interstate module has an interior housing a programmable control circuit that controls operation of the AC drive. A power supply unit has a power supply selectively connectable to the control circuit for providing electrical power to the control circuit independent of the power source.

As noted with respect to claim 9 described above, neither of the cited references shows or suggests a drive system wherein the modules have interiors that house components. In view of the foregoing, it is believed that independent claim 17 defines over the cited references and is in proper form for allowance. Claims 18-23 depend either directly or indirectly from independent claim 17 and further define a drive system not shown or suggested in the art. It is believed that claims 18-23 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

U.S. Serial No.: 10/789,652
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Page 13

Applicant believes that the present application with claims 1-23 is in proper form for allowance and such action is earnestly solicited. The Director is hereby authorized to charge payment of any extension or additional fees associated with this or any other communication or credit any overpayment to Deposit Account No. 50-1170.

Respectfully submitted,



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